PATENT ABSTRACTS OF JAPAN

(11)Publication number :   2000-261649

(43)Date of publication of application : 22.09.2000

(51)Int.Cl.	HO4N 1/387
	G06T 11/80
	HO4N 1/393

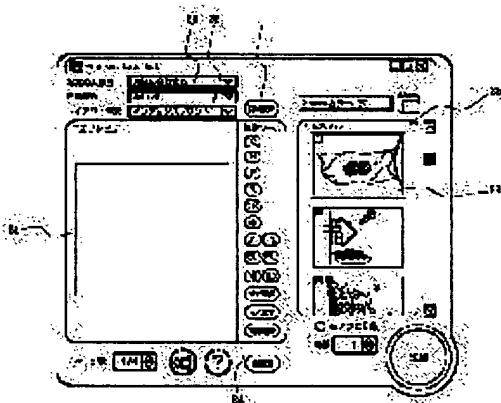| (21)Application number : 11-058455 | (71)Applicant : CANON INC |
| (22)Date of filing :   05.03.1999 | (72)Inventor : MIYAMOTO NORIAKI |
| | WATANABE KAZUHIRO |

(54) IMAGE PROCESSING METHOD, DEVICE THEREOF AND STORAGE MEDIUM

(57)Abstract:

PROBLEM TO BE SOLVED: To improve operability by attaching images obtained by operating plural designated edition processing to a print sheet only by selecting the pictures at the time of calling the same layout, and attaching different images by registering the plural designated editing processing as an end batch editing group.

SOLUTION: When layout designation is selected by a layout selection box 33, layout information corresponding to the layout designation is read from a memory, and a frame indicating the layout is displayed on a print preview window 31. At instructing of editing processing, each kind of button displayed on an editing processing instruction button display window 34 is instructed, so that the editing processing corresponding to the button can be operated to the frame displayed on the printing preview window 31. At the time of operating layout for arranging plural images in one sheet, the images to be edited are selected, and the kind of editings is instructed so that the images to be edited and the editing processing corresponding to the images can be specified.

LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

CLAIMS

[Claim(s)]
[Claim 1] The image-processing method of pointing to two or more edit processings performed to a picture, registering two or more edit processings by which directions were carried out [aforementioned] as a mass of edit group, and carrying out discriminating two or more edit processings performed to a picture as the feature by the specification of an edit group by which registration was carried out [aforementioned].
[Claim 2] The image-processing method according to claim 1 which adds an identifier to the aforementioned edit group, registers, and is characterized by calling the edit group corresponding to the identifier which displayed two or more identifiers registered in a list and was chosen from two or more identifiers which carried out [aforementioned] the list display.
[Claim 3] The image-processing method according to claim 1 characterized by registering two or more edit processings by which directions were carried out [aforementioned] as layout information.
[Claim 4] The aforementioned edit processing is the image-processing method according to claim 1 characterized by considering as rotation of a picture.
[Claim 5] The aforementioned edit processing is the image-processing method according to claim 1 characterized by considering as expansion of a picture.
[Claim 6] The aforementioned edit processing is the image-processing method according to claim 1 characterized by considering as reduction of a picture.
[Claim 7] The aforementioned edit processing is the image-processing method according to claim 1 characterized by considering as change of the brightness of a picture.
[Claim 8] The aforementioned edit processing is the image-processing method according to claim 1 characterized by considering as change of the contrast of a picture.
[Claim 9] The aforementioned edit processing is the image-processing method according to claim 1 characterized by considering as specification of the aspect ratio of a picture.
[Claim 10] The image-processing method according to claim 1 characterized by performing two or more edit processings which carried out [aforementioned] discernment to the newly inputted image information.
[Claim 11] The image-processing method of carrying out performing to other pictures which call the edit processing which discriminates the edit processing performed to the picture, matches and registers an identifier into the edit processing by which discernment was carried out [aforementioned], is matched and is registered into the specified identifier concerned according to specification of an identifier, and are different with the aforementioned picture as the feature.
[Claim 12] The picture which performed the edit processing concerned when registering the aforementioned edit processing is the image-processing method according to claim 11 characterized by controlling not to register.
[Claim 13] The aforementioned picture is the image-processing method according to claim 11 characterized by considering as the picture read from the scanner.
[Claim 14] The aforementioned picture is the image-processing method according to claim 11 characterized by considering as the picture photoed with the digital camera.
[Claim 15] The aforementioned picture is the image-processing method according to claim 11 characterized by considering as the picture stored in the storage.
[Claim 16] The aforementioned picture is the image-processing method according to claim 11 characterized by considering as the picture read from the film scanner.
[Claim 17] the image information which points to a desired selection condition and is in agreement with the conditions concerned out of two or more image information according to the selection condition by which directions were carried out [aforementioned] out of the selection condition of two or more image information registered beforehand -- calling -

- the aforementioned call appearance -- the image-processing method characterized by outputting image information the bottom

[Claim 18] The aforementioned selection condition is the image-processing method according to claim 17 characterized by considering as the conditions on the basis of the order of storing in two or more aforementioned image information.

[Claim 19] The aforementioned selection condition is the image-processing method according to claim 17 characterized by considering as the magnetic information memorized by matching with each of the aforementioned image information.

[Claim 20] The image-processing method according to claim 17 characterized by performing processing corresponding to the name which displayed the name showing the aforementioned selection condition in a list and was specified out of the name which carried out [aforementioned] the list display to a picture with the name showing two or more layout information registered beforehand.

[Claim 21] The image processing system carry out having a directions means to direct two or more edit processings performed to a picture, a registration means to register two or more edit processings by which directions were carried out [aforementioned] as a mass of edit group, and a discernment means to discriminate two or more edit processings performed to a picture by the specification of an edit group by which registration was carried out [aforementioned] as the feature.

[Claim 22] The aforementioned registration means is an image processing system according to claim 21 which adds an identifier to the aforementioned edit group, registers, and is characterized by having a list display means to display two or more identifiers registered in a list, and a call means to call the edit group corresponding to the identifier chosen from two or more identifiers which carried out [aforementioned] the list display.

[Claim 23] The aforementioned registration means is an image processing system according to claim 21 characterized by registering two or more edit processings by which directions were carried out [aforementioned] as layout information.

[Claim 24] The aforementioned edit processing is an image processing system according to claim 21 characterized by considering as rotation of a picture.

[Claim 25] The aforementioned edit processing is an image processing system according to claim 21 characterized by considering as expansion of a picture.

[Claim 26] The aforementioned edit processing is an image processing system according to claim 21 characterized by considering as reduction of a picture.

[Claim 27] The aforementioned edit processing is an image processing system according to claim 21 characterized by considering as change of the brightness of a picture.

[Claim 28] The aforementioned edit processing is an image processing system according to claim 21 characterized by considering as change of the contrast of a picture.

[Claim 29] The aforementioned edit processing is an image processing system according to claim 21 characterized by considering as specification of the aspect ratio of a picture.

[Claim 30] The image processing system according to claim 21 characterized by having an edit means to perform two or more edit processings which the aforementioned discernment means discriminated to the newly inputted image information.

[Claim 31] The image processing system carry out having an edit means perform to other pictures call the edit processing which is matched with the specified identifier concerned and is registered according to an edit processing discernment means discriminate the edit processing performed to the picture, a registration means match and register an identifier to the edit processing discriminated by the aforementioned edit processing discernment means, and specification of an identifier, and differ with the aforementioned picture as the feature.

[Claim 32] The picture which performed the edit processing concerned when the aforementioned registration means registered the aforementioned edit processing is an image processing system according to claim 31 characterized by controlling not to register.

[Claim 33] The image processing system according to claim 31 characterized by having the scanner which reads the aforementioned picture.

[Claim 34] The aforementioned picture is an image processing system according to claim 31 characterized by considering as the picture photoed with the digital camera.

[Claim 35] The image processing system according to claim 31 characterized by having a reading means to read the aforementioned picture in a storage.

[Claim 36] The image processing system according to claim 31 characterized by having the film scanner which reads the aforementioned picture.

[Claim 37] The image processing system characterized by having a directions means to direct a desired selection

condition out of the selection condition of two or more image information registered beforehand, an image information call means to call the image information which is in agreement with the conditions concerned out of two or more image information according to the selection condition directed by the aforementioned directions means, and an output means to output the image information called by the aforementioned image information call means.

[Claim 38] The aforementioned selection condition is an image processing system according to claim 37 characterized by considering as the conditions on the basis of the order of storing in two or more aforementioned image information.

[Claim 39] The aforementioned selection condition is an image processing system according to claim 37 characterized by considering as the magnetic information memorized by matching with each of the aforementioned image information.

[Claim 40] The image processing system according to claim 37 characterized by having the control means controlled to perform processing corresponding to the name specified to be the list display control means controlled to display the name showing the aforementioned selection condition in a list out of the name which carried out [aforementioned] the list display to a picture with the name showing two or more layout information registered beforehand.

[Claim 41] A storage possible in reading [computer / memorized the control program for directing two or more edit processings performed to a picture, the control program for registering two or more edit processings by which directions were carried out / aforementioned / as a mass of edit group, and the control program for discriminating two or more edit processings in which it gives to a picture by specification of an edit group by which registration was carried out / aforementioned] /.

[Claim 42] The storage according to claim 41 which memorized the control program for calling the edit group corresponding to the identifier chosen the control program for adding and registering an identifier to the aforementioned edit group, the control program for controlling to display two or more identifiers registered in a list, and from two or more identifiers which carried out [aforementioned] the list display.

[Claim 43] The storage according to claim 41 characterized by memorizing the control program for registering two or more edit processings by which directions were carried out [aforementioned] as layout information.

[Claim 44] The storage according to claim 41 characterized by memorizing the control program for performing two or more edit processings which carried out [aforementioned] discernment to the newly inputted image information.

[Claim 45] A storage possible in reading [computer / memorized the control program for performing to other pictures which call the edit processing which is matched and is registered into the specified identifier concerned according to the control program for discriminating the edit processing performed to the picture, the control program for matching and registering an identifier into the edit processing by which discernment was carried out / aforementioned /, and specification of an identifier, and are different with the aforementioned picture].

[Claim 46] The picture which performed the edit processing concerned when registering the aforementioned edit processing is a storage according to claim 45 characterized by memorizing the control program for controlling not to register.

[Claim 47] the storage in which reading [computer / which memorized the control program for directing a desired selection condition out of the selection condition of two or more image information registered beforehand, the control program for calling the image information which is in agreement with the conditions concerned out of two or more image information according to the selection condition by which directions were carried out / aforementioned /, and the control program for outputting the image information which carried out / aforementioned / call appearance] is possible

[Claim 48] The storage according to claim 48 characterized by memorizing the control program for performing processing corresponding to the name specified to be a control program for controlling to display the name showing the aforementioned selection condition in a list out of the name which carried out [aforementioned] the list display to a picture with the name showing two or more layout information registered beforehand.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[The technical field to which invention belongs] this invention relates to the image-processing method, the equipment, and the storage which can perform desired edit processing to a picture.
[0002] this invention relates to the image-processing method, the equipment, and the storage for raising the operability at the time of directing edit processing.
[0003] this invention relates to the image-processing method, the equipment, and the storage which can choose and arrange desired image information from two or more image information.
[0004]
[Description of the Prior Art] It pointed to the selected picture conventionally, the performed edit processing was memorized to the image information, and storage of only edit processing was not completed.
[0005] Conventionally, the conditions when choosing a picture from two or more pictures had to be directed whenever it chose.
[0006]
[Problem(s) to be Solved by the Invention] However, the template currently beforehand prepared in the above-mentioned Prior art, for example, for example, when desired pictures, such as a picture which the operator photoed to some chicken types of a Christmas card or a New Year's card, are arranged and edit processing of expansion, reduction, movement, rotation, etc. is moreover carried out to the picture The edit processing performed to the picture was memorized to the picture, and when the picture arranged to a template was changed into a different picture, it had to repoint to those edit processings to the new picture again.
[0007] Therefore, the same edit directions operation had to be repeated by picture number of sheets, and had to be performed and it was very trouble to perform the same edit processing to two or more pictures.
[0008] Moreover, in the above-mentioned Prior art, when repeating and using the same selection condition and choosing a picture, the selection condition had to be inputted into whenever [the] and it was very trouble.
[0009]
[Means for Solving the Problem] In order to solve the technical problem of the above-mentioned conventional technology, this invention points to two or more edit processings performed to a picture, two or more edit processings by which directions were carried out [aforementioned] are registered as a mass of edit group, and two or more edit processings performed to a picture are discriminated by the specification of an edit group by which registration was carried out [aforementioned].
[0010] In order to solve the technical problem of the above-mentioned conventional technology, this invention calls the edit group corresponding to the identifier which added the identifier to the aforementioned edit group preferably, registered, displayed two or more identifiers registered in a list, and was chosen from two or more identifiers which carried out [aforementioned] the list display.
[0011] In order to solve the technical problem of the above-mentioned conventional technology, this invention registers two or more edit processings by which directions were carried out [aforementioned] preferably as layout information.
[0012] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and the aforementioned edit processing is considered as rotation of a picture.
[0013] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and the aforementioned edit processing is considered as expansion of a picture.
[0014] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and the aforementioned edit processing is considered as reduction of a picture.
[0015] In order to solve the technical problem of the above-mentioned conventional technology, this invention is

desirable and the aforementioned edit processing is considered as change of the brightness of a picture.

[0016] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and the aforementioned edit processing is considered as change of the contrast of a picture.

[0017] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and the aforementioned edit processing is considered as specification of the aspect ratio of a picture.

[0018] In order to solve the technical problem of the above-mentioned conventional technology, this invention performs two or more edit processings which carried out [aforementioned] discernment preferably to the newly inputted image information.

[0019] It performs to other pictures call the edit processing which this invention discriminates the edit processing performed to the picture, and matches and registers an identifier into the edit processing by which discernment was carried out [aforementioned], and is matched and is registered into the specified identifier concerned according to specification of an identifier in order to solve the technical problem of the above-mentioned conventional technology, and differ with the aforementioned picture.

[0020] In order to solve the technical problem of the above-mentioned conventional technology, when this invention registers the aforementioned edit processing preferably, the picture which performed the edit processing concerned is controlled not to register.

[0021] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and let the aforementioned picture be the picture read from the scanner.

[0022] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and let the aforementioned picture be the picture photoed with the digital camera.

[0023] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and let the aforementioned picture be the picture stored in the storage.

[0024] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and let the aforementioned picture be the picture read from the film scanner.

[0025] in order to solve the technical problem of the above-mentioned conventional technology, this invention calls the image information which points to a desired selection condition and is in agreement with the conditions concerned out of two or more image information according to the selection condition by which directions were carried out [aforementioned] out of the selection condition of two or more image information registered beforehand, and outputs the image information which carried out [aforementioned] call appearance

[0026] In order to solve the technical problem of the above-mentioned conventional technology, this invention is taken as the conditions on the basis of the order of storing in the desirable image information of the aforementioned plurality [selection condition / aforementioned].

[0027] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and the aforementioned selection condition is taken as the magnetic information memorized by matching with each of the aforementioned image information.

[0028] In order to solve the technical problem of the above-mentioned conventional technology, this invention performs processing corresponding to the name which displayed the name showing the aforementioned selection condition in a list and was specified out of the name which carried out [aforementioned] the list display to a picture with the name showing two or more layout information registered beforehand preferably.

[0029]

[Embodiments of the Invention] <u>Drawing 1</u> is the block diagram showing the composition of the image processing system concerning this invention. You may be the possible storage of functioning as a picture input means by which the picture reader 1 reads the picture of manuscripts, such as a scanner, optically in drawing 1, it being removable to these equipments, such as others, CD-ROM and FD, and MO, memorizing image data, and inputting into this equipment, or may be a communication interface for downloading image data from the end of many items it connects through a communication line. [scanner] Moreover, the picture to read may be a picture which read optically the picture recorded or written down in a record medium like paper, and may be a digital image which you may make it input the picture of a film, using a film scanner as a picture reader 1, or was photoed with the digital camera etc.

[0030] Image display equipment 2 functions also as work memory which it functions as an image display means to display the image data inputted from the picture reader 1, and memory 4 stores the image data inputted by the picture reader 1 including memory (ROM) 3, memory (RAM) 4, a microprocessor 5, and the display screen 6, and stores the data which are in the middle of processing and were produced. Furthermore, the registration data concerning this invention are also registered into memory 4. Even if the control program for performing the flow chart mentioned later is stored in memory 3, it may be stored in memory 4. Storages removable to this equipment (for example, CD-ROM, FD, MO, etc.) When downloading a control program from un-illustrating and the end of the other end it connects

through a communication line, it stores in memory 4. According to the control program stored in memory 3 and 4, processing concerning the basis of control of a microprocessor 5 and this invention is performed. CRT and a liquid crystal display are realized and the display screen 6 enables it to perform edit of the picture on the screen, and registration of various data on the display screen 6 by displaying the screen which performs image data and various edits, and the registration screen of data. It enables it to direct the coordinate of the request on the display screen 6 by displaying cursor 8 on the display screen 6, and moving cursor to a desired position.

[0031] a means by which the input means 7 inputs a character code and functions, such as a keyboard, -- or it is coordinate input meanses, such as a mouse and a tablet, and functions as a means to input various data Image data, graphic data, a character string, etc. function as an output means to output the data created by the display screen 6, and a printer 9 is realized by LBP, the ink jet printer, etc. Therefore, it is read by the picture reader 1, and directions of the kind of edit are inputted by the input means 7, edit processing is performed by the microprocessor 5, and, as for edit processing of movement to the picture displayed on the display screen 6, rotation, expansion, reduction, etc., the picture after edit is outputted from a printer 9.

[0032] In addition, you may be not the thing that restricts all the composition shown in drawing 1 to the equipment which it had independently as a form which carries out the invention in this application but the system to which the picture reader 1 and the printer 9 grade are connected through image display equipment 2 and the input means 7, and the network.

[0033] Drawing 4 is a main screen for directing processing concerning this invention, and is displayed as a window on the display screen 6. In this screen, the picture inputted from the picture reading means 1 is displayed, and processing which chooses a desired picture out of the displayed picture is performed. Reading start directions of the picture by the picture reading means 1 are made by directing the reading button 14. although it answers having directed the reading button 14 once and one reading processing by the picture reading means 1 is performed, a reading object tries to read two or more pictures by this one reading processing, and displays two or more picture **** case on a main screen In addition, directions of the various buttons displayed on the display screen The coordinate of the position directed when the position where the pattern of the button is displayed was directed with the input means 7 (for example, the click of mouse button or the tap of the pen on a tablet etc.), It is possible by judging which button was directed by comparing the coordinate information (stored in memory 4) showing the field which shows the button. This is the same about which screen mentioned later and every button. Moreover, of course, you may input the command equivalent to the various buttons on a screen from a keyboard.

[0034] In a main screen, the picture then chosen is printed from a printer 9 according to directions of the printing button 15. With the picture chosen, it is read from the picture reading means 1 here. Out of two or more pictures currently displayed as a thumbnail picture (reduction picture) Selection of the picture is directed by the click of the input means on the thumbnail picture 13, or the click of the input means on the check box 13 prepared every thumbnail picture 12. It is the thing of the picture as which the identifier which makes it identifiable to have been chosen as the check box 13 according to having been chosen is displayed. It enables it to discriminate a selection picture and a non-choosing picture by displaying a "RE" mark on a check box 13 in the example of drawing 6 . Whenever it clicks selection processing of this picture on the thumbnail picture 12 or a check box 13, it changes selection and un-choosing by turns, and it stores the state of the picture in memory 4. Moreover, the selected picture is displayed on the printing image preview window 11. However, since only the picture arranged in one sheet of form is displayed on the printing image preview window 11, the picture which indicates by preview can be changed before and after the picture displayed now by clicking the preview page turning-over button 16. Moreover, if it arranges with the layout which had the selected picture chosen as a preview page turning-over button side, there is how many sheets of form in all, and the numeric value which shows the form of what position of them is displayed on the printing image preview window 11 is displayed. In the example of drawing 4 , there are four forms in all and it is shown that the 1st of the sheets of it is displayed on the printing image preview window 11. In the example of drawing 4 , the preview display of the selected picture is un-illustrating.

[0035] The layout which is in a selection state out of the layout beforehand registered into memory 4 is displayed on the printing setting box 10. By the input means 7, by directing the downward triangular button of the printing setting box 10, the layout name which can be set as the printing setting box 10 and which should be displayed is read from memory 4, and it displays as a pull down menu. Drawing 5 is a display instantiation view at that time. Here, nine layout names are displayed and the example of a display in the case of making it selectable is shown. By directing a desired layout name within this pull down menu, the layout information memorized by matching with the name is read from memory 4, and it is set as a selection picture. Although the printing image preview window 11 displays the picture arranged at one sheet of form, when the picture is not chosen yet, it displays the frame showing the layout of the picture according to the layout information corresponding to the layout name currently displayed on the printing setting box 10 like drawing 4 . It is the example which arranges the picture of one sheet in one sheet of form in the example of drawing 6 .

That is, whenever a layout is chosen in the printing setting box 10, the display of the frame in the printing image preview window 11 is updated.

[0036] Moreover, when a picture is chosen, the picture is expressed in the printing image preview window 11 as the layout corresponding to the layout name currently displayed on the printing setting box 10. That is, a picture is appended to the position of the frame currently displayed in the state of picture un-choosing.

[0037] It can direct to display the thumbnail picture of the position which clicked the button on the printing image preview window 11 by moving cursor into the printing image preview window 11, clicking the button of a mouse on a thumbnail picture, and canceling the click of a button there. The printing image preview window 11 which displayed the picture chosen by such picture selection directions operation is as being shown in drawing 6 .

[0038] Moreover, there is the method of choosing the layout name which contains the selection condition of a picture with the printing setting box 10 other than the method of directing choosing to a thumbnail picture as the selection method of a picture as mentioned above. In the example of this drawing 6 , in the printing setting box 10, since the layout in which the selection condition of the picture of "the first four coma of a picture" is contained was chosen, the first four coma is chosen from the thumbnail pictures 12, and the identifier which also shows a selection state to the check box of each thumbnail picture is displayed.

[0039] Moreover, when the layout which includes the magnetic information on the picture of an "APS panorama" which is displayed on the pull down menu of drawing 5 as a selection condition as the selection method of a picture using the printing setting box 10 is chosen, there is also the method of choosing the picture which reads each magnetic information on the thumbnail picture currently displayed, and is in agreement with a selection condition, i.e., the picture photoed by the APS panorama in this case. When reading a picture by the picture reading means 1, magnetic information is both read and is stored in memory 4.

[0040] Next, the processing which registers a desired layout so that it can display on the pull down menu of a printing setting box 10 like drawing 5 as a candidate for selection is explained. Registration processing of this layout is registered into memory 4 when an operator inputs required information by the input means 7. Drawing 2 is a flow chart which shows the processing at the time of registration of a layout.

[0041] In order to specify the layout to register, by directing the edit button 17 in a main screen, an edit display (drawing 7) is displayed and the edit processing which should be performed to a picture on this screen is directed. In the form selection box 32, it is a desired paper size and the sense of a form, for example, A4 size, or is B5 size, or every length and every width are directed. This form selection box 32 offers the information stored in memory 4 as the paper size which can be specified beforehand, and a combination pattern of the sense of a form with the gestalt of a pull down menu, and chooses from the inside the paper size the operator was instructed to be according to directions by the input means 7, and the sense of a form. If a form is chosen in the form selection box 32, the frame which expresses the sense of the paper size and form with the print preview window 31 will be displayed. The edit processing performed to the layout which arranges a picture, and its picture is set up in this form. Moreover, the origin of the layout to set up can be obtained by choosing a desired layout with the layout selection box 33 by displaying the frame showing the selected layout on the print preview window 31. The layout name displayed on the layout selection box 33 is the same as the layout name displayed on the pull down menu of drawing 5 , and is a layout name stored in memory 4. However, the layout information set up by this edit display is arrangement and edit processing of a picture, and since the selection condition of a picture is set up on other screens mentioned later, in a layout selection box, you may control the layout name only showing the selection condition of a picture not to display.

[0042] If a layout name is chosen with the layout selection box 33, the layout information corresponding to the layout name will be read from memory 4, the frame showing the layout will be displayed on the print preview window 31, and directions of the edit processing to the frame will be started.

[0043] By directing the various buttons currently displayed on the edit processing directions button viewing window 34 by the input means 7, directions of edit processing perform edit processing corresponding to the button to the frame currently displayed on the print preview window 31, and store the kind of the directed edit in memory 4. At the time of the layout which arranges two or more pictures in one sheet of form, after choosing the picture of the object which edits, the edit processing matched with the picture for edit and its picture can be specified by directing the kind of edit. When the kind of edit is inputted, this is discriminating the picture which is in the selection state, matching the kind of edit directed to the arrangement information on the picture, and storing in memory 4, and can be realized. It is displayed on the edit directions button viewing window 34 as a directions button, and the kinds of edit which can be chosen are specification of the aspect ratio of a picture, the trimming of the specification range, 90 right rotation of a picture, 90 left rotation, expansion of the picture for every predetermined percent, reduction of the picture for every predetermined percent, mirror image reversal, brightness adjustment, contrast adjustment, etc. Moreover, the picture elimination command for eliminating the select command and the command which cancels the directed edit and to return which

chooses all the pictures currently displayed on the print preview window 31 as auxiliary commands of edit processing directions, and the picture directed in the print preview window 31 altogether is also displayed on the edit processing directions button viewing window 34, and is made selectable.

[0044] In this print preview window 31, it is good as environment where various edit processings are performed to the frame showing a picture, and is good also as environment where display a picture on the print preview window 31, and edit processing is performed on the more real display screen, by choosing the thumbnail picture currently displayed in the thumbnail image display window 35 by method which was explained previously. The thumbnail picture 36 displayed on this thumbnail image display window 35 is a picture by which it was indicated by thumbnail on the main screen, when the edit button 17 is directed.

[0045] When the detailed setup key 30 is directed after directing such edit processing, a registration screen (drawing 8) is displayed on the display screen 6, and registration directions of a layout are performed (S1). Display the layout which the operator edited by the previous edit display and was processed on the layout preview viewing window 43 of a registration screen, an operator enables it to check (S2), and the directions input to the printing setting list 19, the new layout name box 40, the magnetic information box 41, and the picture incidental information box 42 is received further (S3). The magnetic information list displayed on the magnetic information box 41 with the gestalt of a pull down menu is shown in drawing 9 . These information is beforehand memorized by memory 4, according to directions of the downward triangular button of the magnetic information box 41, is read from memory 4 and displayed. The magnetic information directed by the input means 7 within this list is chosen, and it displays on the magnetic information box 41.

[0046] The picture incidental information list displayed on the picture incidental information box 42 with the gestalt of a pull down menu is shown in drawing 10 . These information is beforehand memorized by memory 4, according to directions of the downward triangular button of the picture incidental information box 42, is read from memory 4 and displayed. The picture incidental information directed by the input means 7 within this list is chosen, and it displays on the picture incidental information box 42. When picture incidental information shows the selection condition when choosing a picture here and the incidental information of all pictures is chosen, it controls to be displayed as a thumbnail picture, namely, to choose, arrange and output all the pictures read by the picture reading means 1. Moreover, when the incidental information of the picture in every other one is chosen, it is displayed as a thumbnail picture, namely, is every other one, i.e., the thing which chooses, arranges and outputs the picture of an eye, the third picture, the fifth picture, and -- most, from the picture of an eye most among the pictures read by the picture reading means 1.

[0047] When the registration button 44 is directed, to (S4) The layout which consists of a position which arranges the picture currently displayed on the layout view viewing window 43 at the time, and edit processing, The printing setting information currently displayed on the printing setting list box 19, the size information on the photograph currently displayed on the size box of a photograph, The form selection information currently displayed on the form selection box, the number information on the picture currently displayed on the number box of a picture, The stage information currently displayed on the magnetic information box 41 and the picture incidental information currently displayed on the picture incidental information box 42 are matched with the layout name currently displayed on the new layout name box 40, and is memorized in memory 4 (S5). In addition, even if the layout information registered into memory 4 is the case where the various information on a layout is directed on the preview window which displayed the picture, except for the picture, it considers only as the kind and level (for example, parameters, such as expansion and percent of reduction) of edit which were directed. The character string of the request which a layout name functions as an identifier for calling each above-mentioned information, and is inputted by a keyboard, the softkey, etc. may also be a digit string. Each information stored in memory 4 whenever it was inputted on the registration screen (drawing 8), when the deletion button 45 was directed is altogether eliminated from memory 4, and it returns to an edit display (drawing 7). Moreover, when a cancellation button is directed, after a registration screen (drawing 8) is displayed, it is newly inputted, and the information stored in memory 4 is eliminated from memory 4, and it returns to an edit display (drawing 7).

[0048] Moreover, in editing the layout which does not register a new layout but has already been registered, after specifying the layout name by the edit display (drawing 7), calling layout information and directing edit on an edit display and a registration screen to the layout information, layout information is updated to the newly directed information by directing the O.K. button 46. In this case, after displaying the layout name of the layout previously called by the edit display on the new layout name box 40 and calling and displaying layout information to the directed layout name according to directions of the O.K. button 46, the information in the memory 4 of the item newly changed [which were changed and was directions-inputted] is updated to the information newly inputted or changed.

[0049] The processing at the time of the call of the registered layout is explained using the flow chart of drawing 3 . In a main screen (drawing 6), if a desired layout name is chosen with the printing setting box 10, the frame which calls the layout information which matches with the layout name and is stored in memory 4, and shows the layout to the print

preview window 11 will be displayed, and the check of the layout by the operator (S21) will be enabled. Moreover, when the selected layout is a thing also containing the selection condition of a picture, a picture is chosen according to the selection condition, and when it is that in which the selected layout does not contain the selection condition of a picture, selection operation of a picture is received (S22). If selection operation of the picture by the operator is made in S23, it will progress to S24. In S24, the picture chosen by S22 or S23 is appended and displayed on the print preview window 11. Let the picture displayed on the print preview window 11 be the picture arranged and edited as the layout called from memory 4 corresponding to the selected layout name. Print data are constituted as it was displayed on (S25) and the print preview window 11, when the printing button 15 was directed, and it prints from a printer 9.

[0050]

[Effect of the Invention] In picture printing application, by as mentioned above, the thing for which the operator itself registers as a template the size and the degree of tilt angle of a picture, and the edit group which is not position [a group] and cut, and which comes, edits the range, ****, etc. and consists of those edit directions of two or more when it appends a picture which calls the same layout and is different, the picture which performed two or more edit processings which the operator directed before can be appended to a print sheet only by choosing a picture, and operability is markedly alike and improves Moreover, since it becomes unnecessary to direct repeat edit processing, possibility that a failure will happen also becomes low and more exact edit can be performed.

[0051] Moreover, for example, the date currently recorded in relation to the picture like the magnetic information in an APS film, Magnetic information, such as time, exposure, a focal distance, and an aspect ratio (aspect ratio) of a picture When registering beforehand two or more selection conditions on the basis of the order of storing of two or more image information used as the candidate for selection and **(ing) a selection condition, the operability of directions of a selection condition improves by carrying out that what is necessary is just to direct a desired selection condition out of two or more of the selection conditions registered.
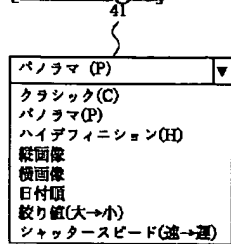
[Translation done.]

* NOTICES *

DRAWINGS

[Drawing 9]

41

| パノラマ (P) | ▼ |

クラシック(C)
パノラマ(P)
ハイデフィニション(H)
縦画像
横画像
日付順
絞り値(大→小)
シャッタースピード(速→遅)

プルダウン表示

[Drawing 10]

42

| 全ての画像 | ▼ |

全ての画像
一つおきの画像
最初の4画像
最初の6画像

プルダウン表示

[Drawing 1]

6 表示画面

8 カーソル

9 プリンター

3 メモリー (ROM)

1 画像読み取り装置

7 入力手段

5 マイクロプロセッサー

2 画像表示装置

4 メモリー (RAM)

[Drawing 2]

```
        ┌─────────────┐
        │   スタート    │
        └─────────────┘
               │
               ▼
    ┌──────────────────┐  S1
    │  登録画面の呼び出し  │
    └──────────────────┘
               │
               ▼
    ┌──────────────────┐  S2
    │ ユーザーが編集、加工したレ │
    │ イアウトが表示画面上にプレ │
    │  ビューされている      │
    └──────────────────┘
               │
               ▼
    ┌──────────────────┐  S3
    │   指示項目の入力     │
    └──────────────────┘
               │
               ▼
        ◇ 登録指示？ ◇  S4
   NO ◁───┤        │
               │ YES
               ▼
    ┌──────────────────┐  S5
    │       登録        │
    └──────────────────┘
               │
               ▼
        ┌─────────────┐
        │   エンド     │
        └─────────────┘
```

[Drawing 3]

```
        ┌─────────────┐
        │   スタート    │
        └─────────────┘
               │
               ▼
    ┌──────────────────┐  S21
    │  レイアウトをプレビュー表示 │
    └──────────────────┘
               │
               ▼
   NO ◁── ◇ 画像の自動 ◇  S22
       │      貼り付けか？
       │          │ YES
       ▼          │
  ┌─────────┐ S23 │
  │ 画像選択  │     │
  └─────────┘     │
       │          ▼
       └──▶ ┌──────────────────┐  S24
            │  画像をプレビュー表示  │
            └──────────────────┘
                     │
                     ▼
          NO ◁── ◇ 印刷？ ◇  S25
              │       │ YES
              │       ▼
              │  ┌──────────────────┐  S26
              │  │      印刷        │
              │  └──────────────────┘
              │       │
              └──────▶│
                      ▼
              ┌─────────────┐
              │    END      │
              └─────────────┘
```

[Drawing 4]

10 18 13 12

Flm Get Lab. Mein

フィルムタイプ 35mmカラーポジ
印刷設定 A4：横 キャビネ

11 — 印刷プレビュー サムネイル

16 — ページ数 1/4

17 — 編集

14 — 読み込み

モノクロ印刷
部数 1
印刷 — 15

[Drawing 5]

10 20

Flm Get Lab. Mein

フィルムタイプ 35mmカラーポジ
印刷設定 A4：横 キャビネ

A4：横 サービスサイズ
A4：横 1画像
A4：横 2画像
A4：横 4画像
A3：横 1画像
A3：横 4画像
＊A4：横 APSパノラマ
＊A4：横 初めの4画像

印刷プレビュー

ページ数 1/4

編集

読み込み

モノクロ印刷
部数 1
印刷
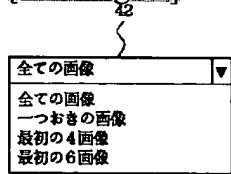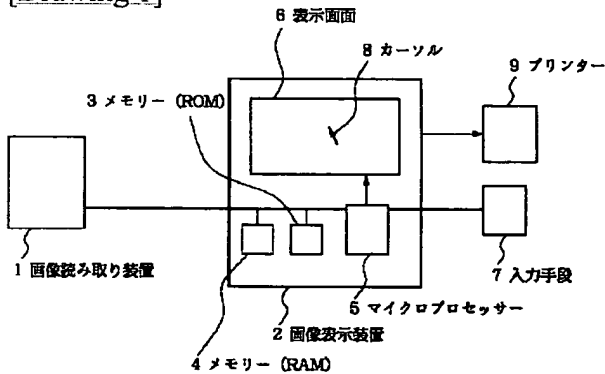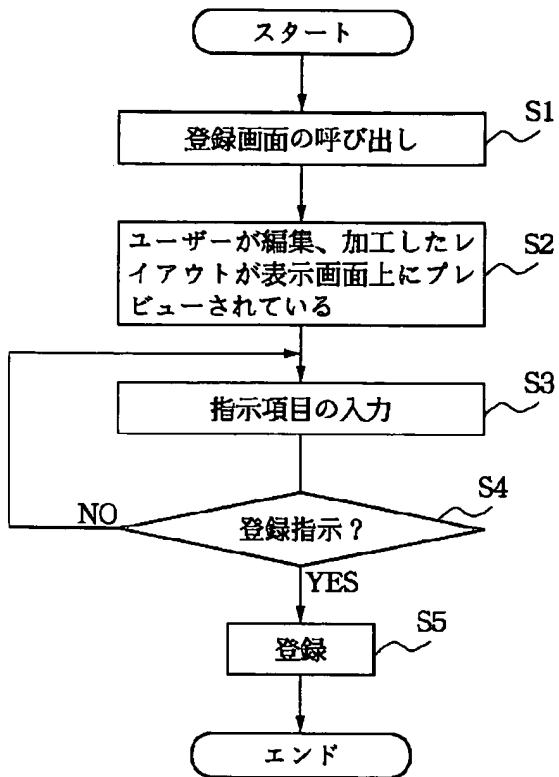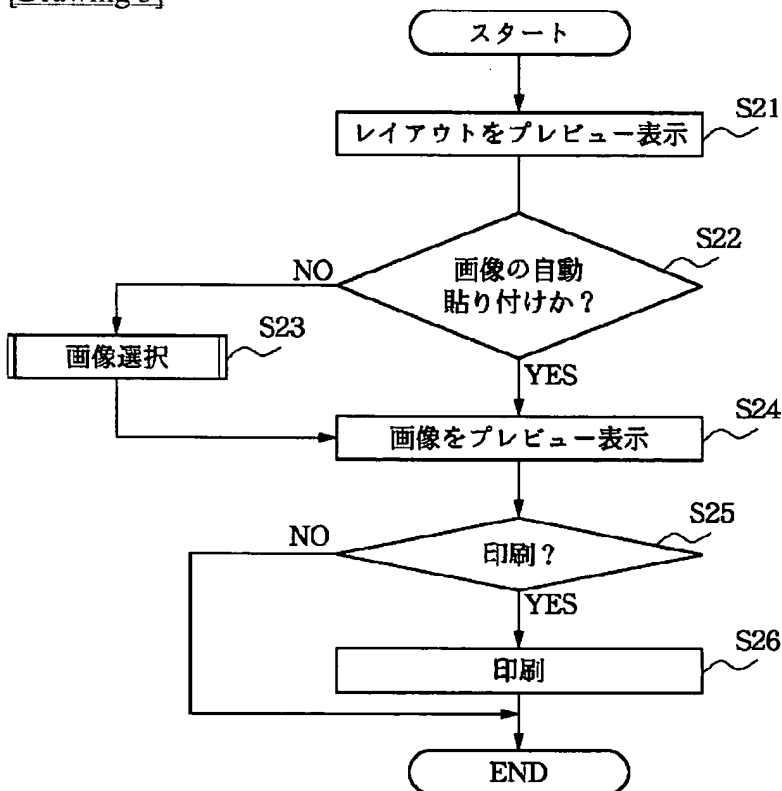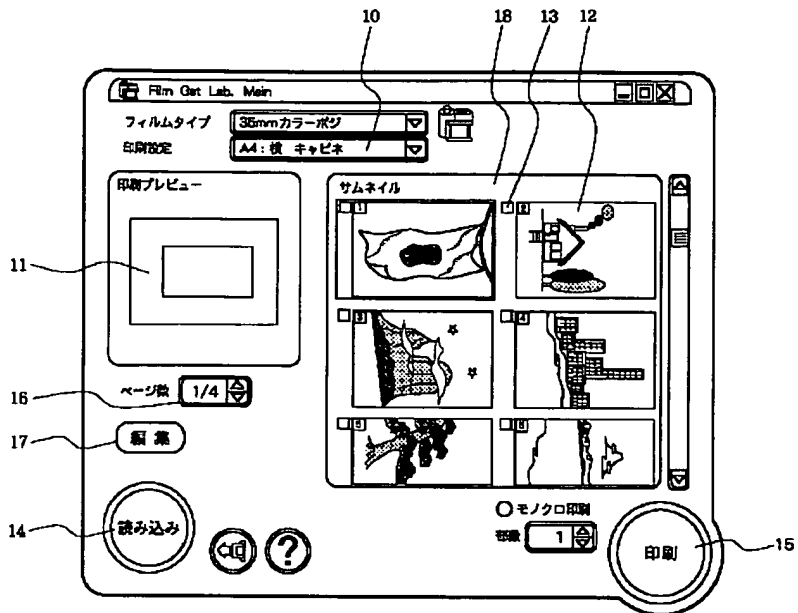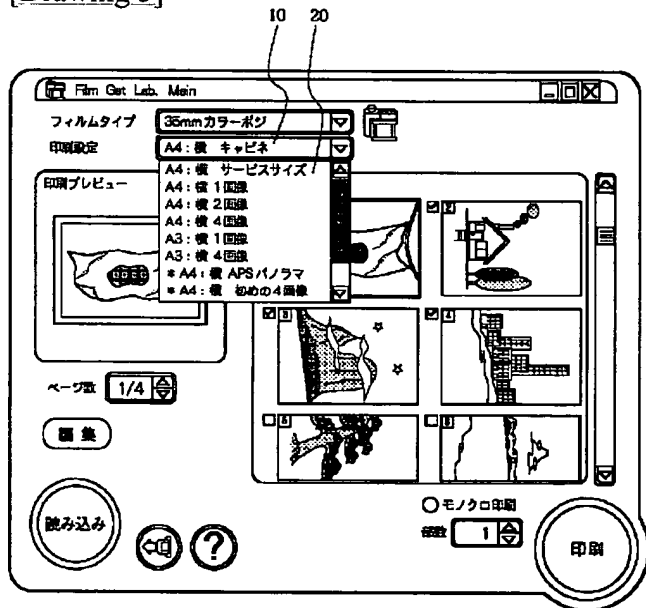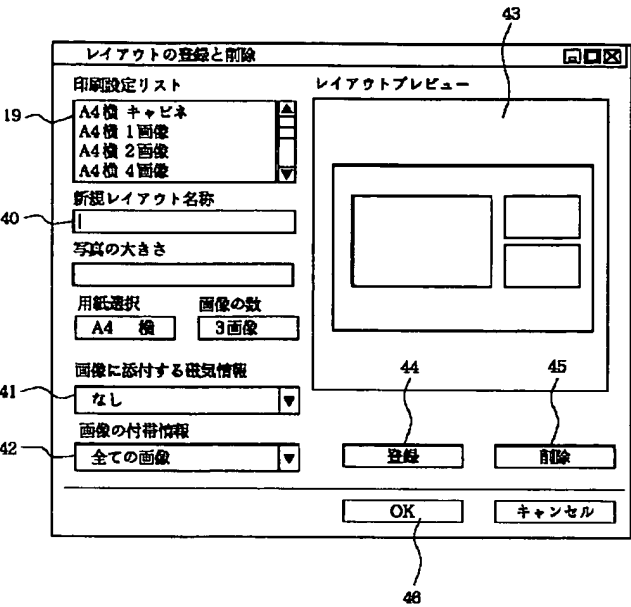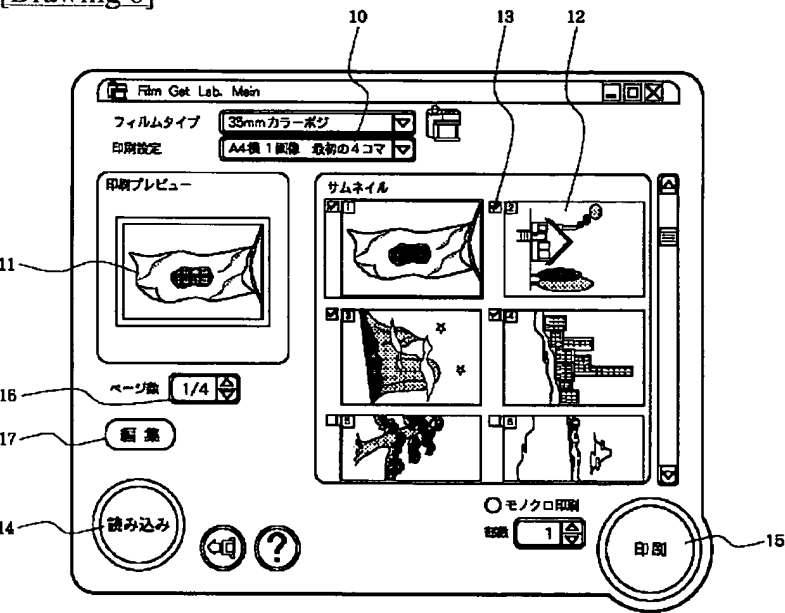
[Drawing 8]

[Drawing 6]

[Drawing 7]
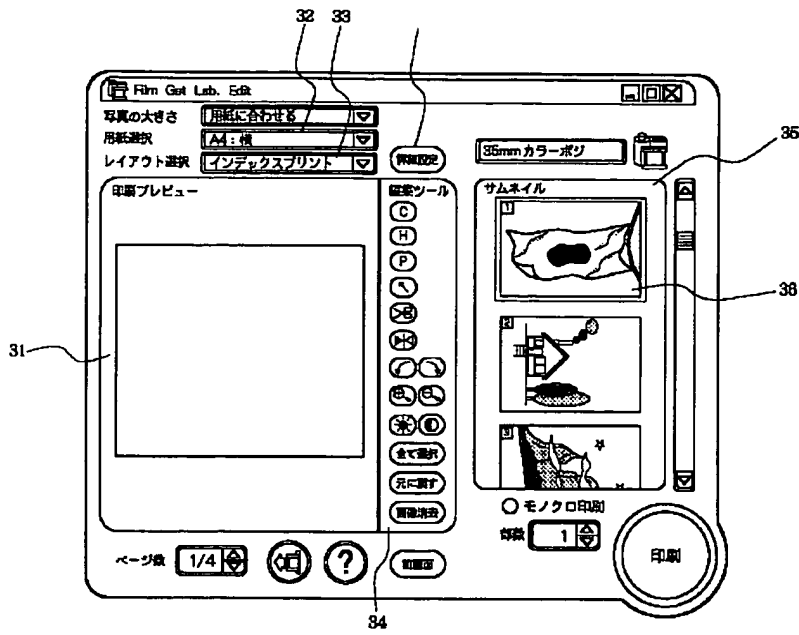
[Translation done.]

(19)日本国特許庁（ＪＰ）　　　　(12) **公 開 特 許 公 報**（Ａ）　　　　(11)特許出願公開番号

特開2000−261649

（P2000−261649A）

(43)公開日　平成12年9月22日(2000.9.22)

(51)Int.Cl.⁷	識別記号		F I		テーマコード(参考)
Ｈ０４Ｎ	1/387		Ｈ０４Ｎ	1/387	5B050
Ｇ０６Ｔ	11/80			1/393	5C076
Ｈ０４Ｎ	1/393		Ｇ０６Ｆ	15/62　　322A	

審査請求　未請求　請求項の数48　ＯＬ　（全 11 頁）

(21)出願番号　　特願平11−58455

(22)出願日　　　平成11年3月5日(1999.3.5)

(71)出願人　000001007

キヤノン株式会社

東京都大田区下丸子3丁目30番2号

(72)発明者　宮本　紀明

東京都大田区下丸子3丁目30番2号キヤノン株式会社内

(72)発明者　渡辺　和宏

東京都大田区下丸子3丁目30番2号キヤノン株式会社内

(74)代理人　100090538

弁理士　西山　恵三　（外2名）

Ｆターム(参考)　5B050 AA09 BA15 CA07 DA01 EA12
　　　　　　　　　　　　 FA02 FA03 FA08 FA13
　　　　　　　　5C076 AA21 AA22 AA23 AA24 AA40

(54)【発明の名称】　画像処理方法、装置及び記憶媒体

(57)【要約】

【課題】　異なる画像に、同じレイアウトを指定する時の操作性を向上させる。また、複数の画像情報の中から所望の画像情報を選択する為の選択条件を入力する時の操作性を向上させる。

【解決手段】　画像に対して施された複数の編集情報や、画像を選択する時の選択条件（21、22）にレイアウト名称（20）を対応付けて登録（24）することにより、そのレイアウト名称の指示に応じてそれらの情報を再利用することを可能とする。
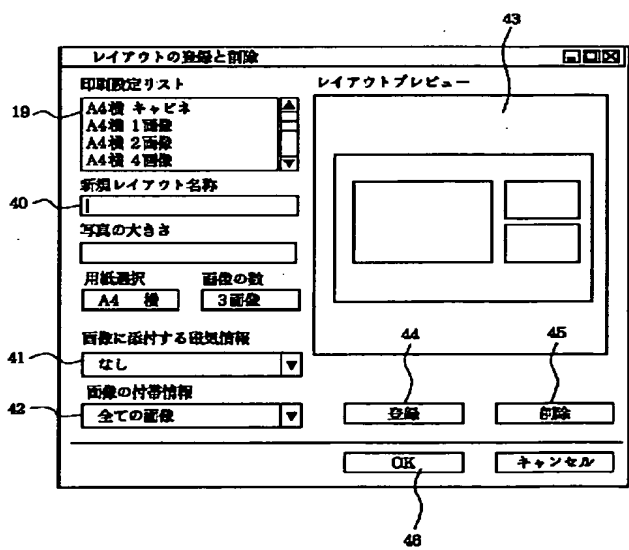
3

【請求項28】　前記編集処理は、画像のコントラスト
の変更とすることを特徴とする請求項21に記載の画像
処理装置。

【請求項29】　前記編集処理は、画像のアスペクト比
の指定とすることを特徴とする請求項21に記載の画像
処理装置。

【請求項30】　前記識別手段が識別した複数の編集処
理を、新たに入力した画像情報に対して施す編集手段を
有することを特徴とする請求項21に記載の画像処理装
置。

【請求項31】　画像に対して施されている編集処理を
識別する編集処理識別手段と、

前記編集処理識別手段により識別された編集処理に識別
子を対応付けて登録する登録手段と、

識別子の特定に応じて、当該特定された識別子に対応付
けられて登録されている編集処理を呼び出して前記画像
とは異なる他の画像に実行する編集手段とを有すること
を特徴とする画像処理装置。

【請求項32】　前記登録手段は、前記編集処理を登録
する時に、当該編集処理を施した画像は登録しないよう
制御することを特徴とする請求項31に記載の画像処理
装置。

【請求項33】　前記画像を読み取るスキャナを備える
ことを特徴とする請求項31に記載の画像処理装置。

【請求項34】　前記画像は、デジタルカメラにより撮
影した画像とすることを特徴とする請求項31に記載の
画像処理装置。

【請求項35】　前記画像を記憶媒体から読み取る読取
手段を備えることを特徴とする請求項31に記載の画像
処理装置。

【請求項36】　前記画像を読み取るフィルムスキャナ
を備えることを特徴とする請求項31に記載の画像処理
装置。

【請求項37】　予め登録されている複数の画像情報の
選択条件の中から所望の選択条件を指示する指示手段
と、

前記指示手段により指示された選択条件に従って、複数
の画像情報の中から当該条件に一致する画像情報を呼び
出す画像情報呼び出し手段と、

前記画像情報呼び出し手段により呼び出した画像情報を
出力する出力手段とを有することを特徴とする画像処理
装置。

【請求項38】　前記選択条件は、前記複数の画像情報
における格納順を基準とした条件とすることを特徴とす
る請求項37に記載の画像処理装置。

【請求項39】　前記選択条件は、前記画像情報の各々
に対応付けて記憶されている磁気情報とすることを特徴
とする請求項37に記載の画像処理装置。

【請求項40】　予め登録されている複数のレイアウト
情報を表す名称と共に、前記選択条件を表す名称をリス

4

ト表示するよう制御するリスト表示制御手段と、

前記リスト表示した名称の中から指定された名称に対応
する処理を画像に対して施すよう制御する制御手段とを
有することを特徴とする請求項37に記載の画像処理装
置。

【請求項41】　画像に対して施す複数の編集処理を指
示する為の制御プログラムと、

前記指示された複数の編集処理をひとまとまりの編集グ
ループとして登録する為の制御プログラムと、

前記登録された編集グループの特定により、画像に対し
て施す複数の編集処理を識別する為の制御プログラムと
を記憶したコンピュータにより読み取り可能な記憶媒
体。

【請求項42】　前記編集グループに対して識別子を付
加して登録する為の制御プログラムと、

登録されている複数の識別子をリスト表示するよう制御
する為の制御プログラムと、

前記リスト表示した複数の識別子の中から選択された識
別子に対応する編集グループを呼び出す為の制御プログ
ラムとを記憶した請求項41に記載の記憶媒体。

【請求項43】　前記指示された複数の編集処理をレイ
アウト情報として登録する為の制御プログラムを記憶し
たことを特徴とする請求項41に記載の記憶媒体。

【請求項44】　前記識別した複数の編集処理を、新た
に入力した画像情報に対して施す為の制御プログラムを
記憶したことを特徴とする請求項41に記載の記憶媒
体。

【請求項45】　画像に対して施されている編集処理を
識別する為の制御プログラムと、

前記識別された編集処理に識別子を対応付けて登録する
為の制御プログラムと、

識別子の特定に応じて、当該特定された識別子に対応付
けられて登録されている編集処理を呼び出して前記画像
とは異なる他の画像に実行する為の制御プログラムとを
記憶したコンピュータにより読み取り可能な記憶媒体。

【請求項46】　前記編集処理を登録する時に、当該編
集処理を施した画像は登録しないよう制御する為の制御
プログラムを記憶したことを特徴とする請求項45に記
載の記憶媒体。

【請求項47】　予め登録されている複数の画像情報の
選択条件の中から所望の選択条件を指示する為の制御プ
ログラムと、

前記指示された選択条件に従って、複数の画像情報の中
から当該条件に一致する画像情報を呼び出す為の制御プ
ログラムと、

前記呼び出した画像情報を出力する為の制御プログラム
とを記憶したコンピュータにより読取可能な記憶媒体。

【請求項48】　予め登録されている複数のレイアウト
情報を表す名称と共に、前記選択条件を表す名称をリス
ト表示するよう制御する為の制御プログラムと、

7

における格納順を基準とした条件とする。

【0027】上記従来技術の課題を解決する為に，本発明は、好ましくは前記選択条件は、前記画像情報の各々に対応付けて記憶されている磁気情報とする。

【0028】上記従来技術の課題を解決する為に，本発明は、好ましくは予め登録されている複数のレイアウト情報を表す名称と共に、前記選択条件を表す名称をリスト表示し、前記リスト表示した名称の中から指定された名称に対応する処理を画像に対して施す。

【0029】

【発明の実施の形態】図1は本発明に係る画像処理装置の構成を示すブロック図である。図1において、画像読取装置1は、スキャナ等、原稿の画像を光学的に読み取る画像入力手段として機能するものであって、スキャナの他、CD−ROMやFD、MO等の本装置に着脱可能であって画像データを記憶し、本装置に入力することの可能な記憶媒体であっても良いし、或は通信回線を介して接続される多端末から画像データをダウンロードするための通信インタフェースであっても良い。また、読み取る画像は紙のような記録媒体に記録、或は記入された画像を光学的に読み取った画像であっても良いし、画像読取装置1としてフィルムスキャナを用いてフィルムの画像を入力するようにしても良いし、或は、デジタルカメラ等により撮影されたデジタル画像であっても良い。

【0030】画像表示装置2は、画像読取装置1から入力した画像データを表示する画像表示手段として機能するものであって、メモリー（ROM）3、メモリー（RAM）4、マイクロプロセッサー5、表示画面6を含み、メモリー4は、画像読取装置1により入力した画像データを格納し、また、処理途中で生じたデータを格納するワークメモリとしても機能する。更に、本発明に係る登録データも、メモリー4に登録される。後述するフローチャートを実行する為の制御プログラムは、メモリー3に格納されたものであっても、メモリー4に格納されたものであっても良い。本装置に着脱可能な記憶媒体（例えばCD−ROM、FD、MO等。不図示）や、通信回線を介して接続される他端末から制御プログラムをダウンロードする場合は、メモリー4に格納する。メモリー3及び4に格納された制御プログラムに従って、マイクロプロセッサー5の制御のもと、本発明に係る処理は実行される。表示画面6はCRTや液晶表示器により実現され、画像データや各種編集を行う画面及びデータの登録画面を表示することにより、その画面上での画像の編集、各種データの登録を表示画面6上で行えるようにする。表示画面6にはカーソル8を表示してカーソルを所望の位置に移動させることにより、表示画面6上の所望の座標を指示できるようにする。

【0031】入力手段7は、キーボード等の文字コード及びファンクションを入力する手段や、或はマウス、タブレット等の座標入力手段であって、各種データを入力

8

する手段として機能する。プリンター9は、画像データや、図形データ、文字列等、表示画面6で作成されたデータを出力する出力手段として機能するものであって、例えばLBPやインクジェットプリンタ等により実現される。従って、画像読取装置1により読み取られ、表示画面6に表示された画像に対する移動、回転、拡大、縮小等の編集処理は、入力手段7により編集の種類の指示が入力され、マイクロプロセッサー5により編集処理が実行され、プリンター9より編集後の画像が出力される。

【0032】尚、本願発明を実施する形態として、図1に示す構成を全て単独で備えた装置に限るものではなく、画像読取装置1やプリンター9等が画像表示装置2及び入力手段7とネットワークを介して接続されているシステムであっても良い。

【0033】図4は、本発明に係る処理を指示する為のメイン画面であって、表示画面6上にウインドウとして表示される。この画面において、画像読取手段1より入力した画像を表示し、その表示された画像の中から所望の画像を選択する処理が行われる。画像読取手段1による画像の読取開始指示は読み込みボタン14を指示することによりなされる。読み込みボタン14を1回指示したことに応答して、画像読み取り手段1による一回の読取処理を行うが、読取対象が複数画像ある場合は、この一回の読取処理で複数の画像を読み込むむ、メイン画面に表示する。尚、表示画面に表示される各種ボタンの指示は、そのボタンのパターーンが表示されている位置を入力手段7で指示（例えばマウスボタンのクリック或はタブレット上でのペンのタップ等）された時に、指示された位置の座標と、ボタンを表示している領域を表す座標情報（メモリー4に格納されている）とを比較して、どのボタンが指示されたかを判断することにより可能である。これは、後述するどの画面及びどのボタンについても同様である。また、画面上の各種ボタンに相当するコマンドをキーボードより入力しても良いことは勿論である。

【0034】メイン画面においては、印刷ボタン15の指示に応じて、その時選択されている画像をプリンター9より印刷する。ここで、選択されている画像とは、画像読取手段1より読み取られ、サムネイル画像（縮小画像）として表示されている複数の画像の中から、サムネイル画像13上での入力手段のクリック、或はサムネイル画像12毎に設けたチェックボックス13上での入力手段のクリックによりその画像の選択が指示され、選択されたことに応じてチェックボックス13に選択されたことを識別可能とする識別子が表示されている画像のことである。図6の例ではチェックボックス13に「レ」マークを表示することにより、選択画像と非選択画像とを識別できるようにしている。この、画像の選択処理は、サムネイル画像12上或はチェックボックス13上

11

る。ただし、この編集画面で設定するレイアウト情報は画像の配置と編集処理であって、画像の選択条件は後述する他の画面で設定するので、レイアウト選択ボックスには画像の選択条件のみを表すレイアウト名称は表示しないように制御しても良い。

【0042】レイアウト選択ボックス33でレイアウト名称が選択されたら、そのレイアウト名称に対応するレイアウト情報をメモリー4から読み出して、そのレイアウトを表す枠を印刷プレビューウインドウ31に表示し、その枠に対する編集処理の指示を開始する。

【0043】編集処理の指示は、編集処理指示ボタン表示ウインドウ34に表示されている各種ボタンを入力手段7により指示することにより、そのボタンに対応する編集処理を印刷プレビューウインドウ31に表示されている枠に対して施し、かつその指示された編集の種類をメモリー4に格納する。1枚の用紙内に複数の画像を配置するレイアウトのときは、編集を施す対象の画像を選択した後、編集の種類を指示することで、編集対象の画像とその画像に対応付ける編集処理を特定することができる。これは、編集の種類が入力された時に、選択状態になっている画像を識別し、その画像の配置情報に指示された編集の種類を対応付けてメモリー4に格納することで、実現可能である。編集指示ボタン表示ウインドウ34に指示ボタンとして表示され、選択が可能な編集の種類は、画像のアスペクト比の指定、指定範囲のトリミング、画像の右90度回転、左90度回転、所定パーセント毎の画像の拡大、所定パーセント毎の画像の縮小、鏡像反転、ブライトネス調整、コントラスト調整等である。また、編集処理指示の補助コマンドとして、印刷プレビューウインドウ31に表示されている全ての画像を選択する全て選択コマンド、指示した編集を取り消す元に戻すコマンド、印刷プレビューウインドウ31内で指示した画像を消去するための画像消去コマンドも、編集処理指示ボタン表示ウインドウ34に表示し、選択可能とする。

【0044】この、印刷プレビューウインドウ31では、画像を表す枠に対して各種編集処理を施す環境としても良いが、サムネイル画像表示ウインドウ35内に表示されているサムネイル画像を、先に説明したような方法で選択することにより、画像を印刷プレビューウインドウ31に表示し、よりリアルな表示画面上で編集処理を施す環境としても良い。この、サムネイル画像表示ウインドウ35に表示するサムネイル画像36は、編集ボタン17が指示された時点でメイン画面にサムネイル表示されていた画像である。

【0045】このような編集処理を指示した後、詳細設定ボタン30が指示された場合に、登録画面（図8）を表示画面6に表示し、レイアウトの登録指示を行う（S1）。先の編集画面でオペレータが編集、加工したレイアウトを登録画面のレイアウトプレビュー表示ウインド
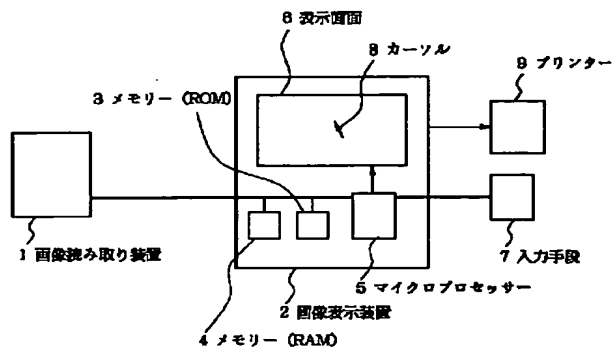
12

ウ43に表示してオペレータが確認できるようにし（S2）、更に、印刷設定リスト19、新規レイアウト名称ボックス40、磁気情報ボックス41、画像付帯情報ボックス42への指示入力を受けつける（S3）。磁気情報ボックス41にプルダウンメニューの形態で表示する磁気情報リストを図9に示す。これらの情報は、メモリー4に予め記憶されているものであって、磁気情報ボックス41の下向き三角ボタンの指示に応じてメモリー4から読み出して表示する。このリスト内で入力手段7により指示された磁気情報を選択し、磁気情報ボックス41に表示する。

【0046】画像付帯情報ボックス42にプルダウンメニューの形態で表示する画像付帯情報リストを図10に示す。これらの情報は、メモリー4に予め記憶されているものであって、画像付帯情報ボックス42の下向き三角ボタンの指示に応じてメモリー4から読み出して表示する。このリスト内で入力手段7により指示された画像付帯情報を選択し、画像付帯情報ボックス42に表示する。ここで、画像付帯情報とは、画像を選択する時の選択条件を示すものであって、例えば全ての画像という付帯情報を選択した場合には、サムネイル画像として表示されている、即ち画像読取手段1により読み取った全ての画像を選択し、配置して出力するよう制御する。また、一つおきの画像という付帯情報を選択した場合には、サムネイル画像として表示されている、即ち画像読取手段1により読み取った画像のうち、一番目の画像から一つおき、即ち一番目の画像、三番目の画像、五番目の画像、…を選択し、配置して出力するものである。
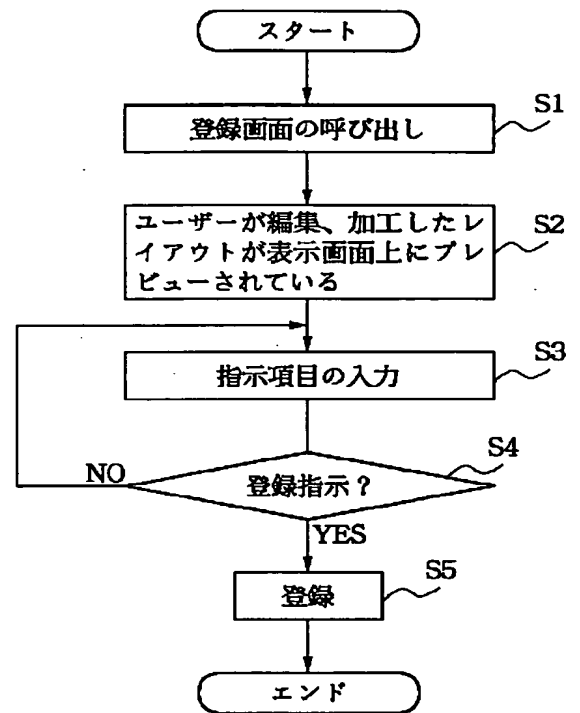
【0047】登録ボタン44が指示された場合（S4）には、その時点でレイアウトビュー表示ウインドウ43に表示されている画像を配置する位置と編集処理からなるレイアウト、印刷設定リストボックス19に表示されている印刷設定情報、写真の大きさボックスに表示されている写真の大きさ情報、用紙選択ボックスに表示されている用紙選択情報、画像の数ボックスに表示されている画像の数情報、磁気情報ボックス41に表示されている時期情報、画像付帯情報ボックス42に表示されている画像付帯情報を、新規レイアウト名称ボックス40に表示されているレイアウト名称と対応付けてメモリー4に記憶する（S5）。尚、メモリー4に登録するレイアウト情報とは、レイアウトの各種情報を画像を表示したプレビューウインドウ上で指示した場合であっても、その画像を除き、指示された編集の種類とレベル（例えば拡大や縮小のパーセントなどのパラメータ）のみとする。レイアウト名称は、上記の各情報を呼び出すための識別子として機能するものであって、キーボードやソフトキー等により入力される所望の文字列でも数字列であっても良い。削除ボタン45が指示された場合には、登録画面（図8）で入力される度にメモリー4に格納された各情報をメモリー4から全て消去し、編集画面（図

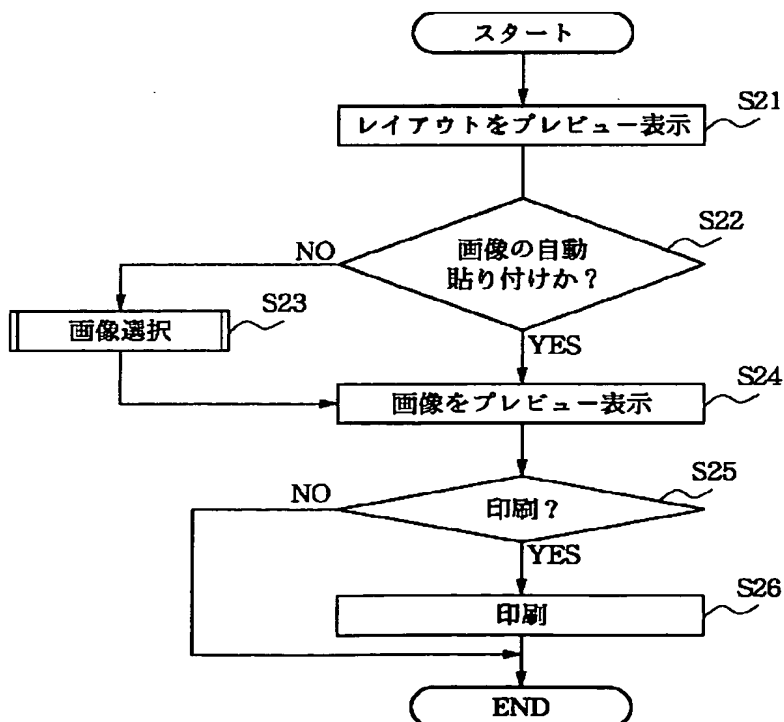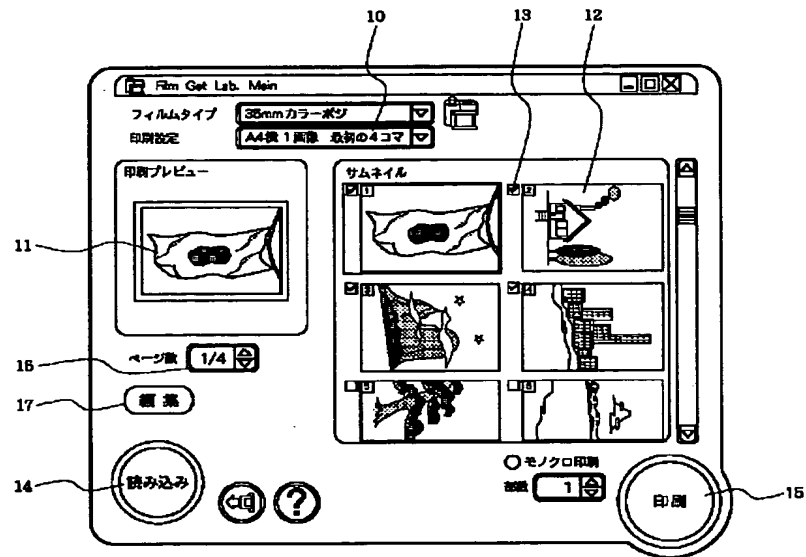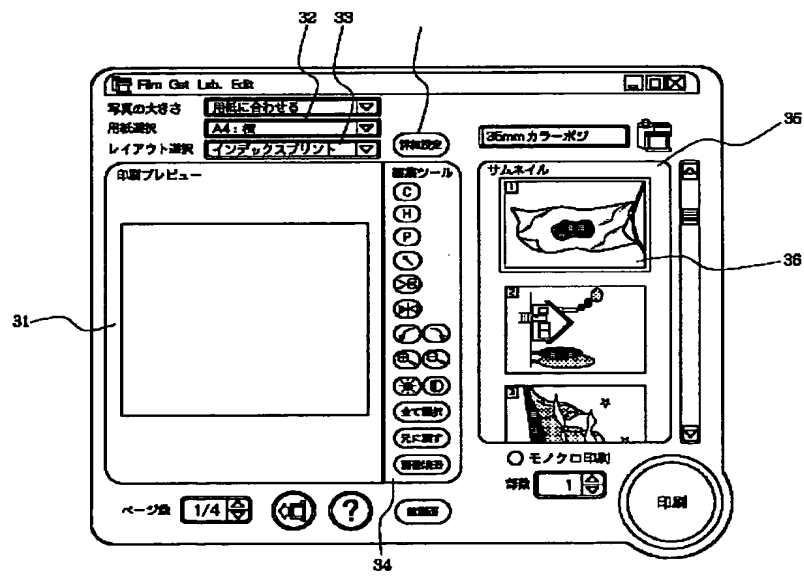【図1】

【図2】

【図3】

【図6】

【図7】

PATENT ABSTRACTS OF JAPAN

(11)Publication number :   2000-261649

(43)Date of publication of application : 22.09.2000

(51)Int.Cl.	HO4N 1/387 GO6T 11/80 HO4N 1/393

(21)Application number : 11-058455   (71)Applicant : CANON INC

(22)Date of filing :   05.03.1999   (72)Inventor : MIYAMOTO NORIAKI
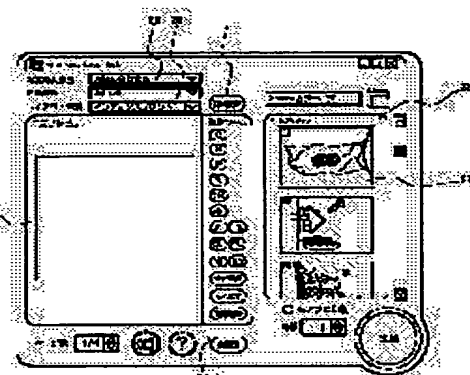   WATANABE KAZUHIRO

(54) IMAGE PROCESSING METHOD, DEVICE THEREOF AND STORAGE MEDIUM

(57)Abstract:

PROBLEM TO BE SOLVED: To improve operability by attaching images obtained by operating plural designated edition processing to a print sheet only by selecting the pictures at the time of calling the same layout, and attaching different images by registering the plural designated editing processing as an end batch editing group.

SOLUTION: When layout designation is selected by a layout selection box 33, layout information corresponding to the layout designation is read from a memory, and a frame indicating the layout is displayed on a print preview window 31. At instructing of editing processing, each kind of button displayed on an editing processing instruction button display window 34 is instructed, so that the editing processing corresponding to the button can be operated to the frame displayed on the printing preview window 31. At the time of operating layout for arranging plural images in one sheet, the images to be edited are selected, and the kind of editings is instructed so that the images to be edited and the editing processing corresponding to the images can be specified.

LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision

of rejection]

[Date of requesting appeal against examiner's
decision of rejection]

[Date of extinction of right]

CLAIMS

[Claim(s)]
[Claim 1] The image-processing method of pointing to two or more edit processings performed to a picture, registering two or more edit processings by which directions were carried out [aforementioned] as a mass of edit group, and carrying out discriminating two or more edit processings performed to a picture as the feature by the specification of an edit group by which registration was carried out [aforementioned].
[Claim 2] The image-processing method according to claim 1 which adds an identifier to the aforementioned edit group, registers, and is characterized by calling the edit group corresponding to the identifier which displayed two or more identifiers registered in a list and was chosen from two or more identifiers which carried out [aforementioned] the list display.
[Claim 3] The image-processing method according to claim 1 characterized by registering two or more edit processings by which directions were carried out [aforementioned] as layout information.
[Claim 4] The aforementioned edit processing is the image-processing method according to claim 1 characterized by considering as rotation of a picture.
[Claim 5] The aforementioned edit processing is the image-processing method according to claim 1 characterized by considering as expansion of a picture.
[Claim 6] The aforementioned edit processing is the image-processing method according to claim 1 characterized by considering as reduction of a picture.
[Claim 7] The aforementioned edit processing is the image-processing method according to claim 1 characterized by considering as change of the brightness of a picture.
[Claim 8] The aforementioned edit processing is the image-processing method according to claim 1 characterized by considering as change of the contrast of a picture.
[Claim 9] The aforementioned edit processing is the image-processing method according to claim 1 characterized by considering as specification of the aspect ratio of a picture.
[Claim 10] The image-processing method according to claim 1 characterized by performing two or more edit processings which carried out [aforementioned] discernment to the newly inputted image information.
[Claim 11] The image-processing method of carrying out performing to other pictures which call the edit processing which discriminates the edit processing performed to the picture, matches and registers an identifier into the edit processing by which discernment was carried out [aforementioned], is matched and is registered into the specified identifier concerned according to specification of an identifier, and are different with the aforementioned picture as the feature.
[Claim 12] The picture which performed the edit processing concerned when registering the aforementioned edit processing is the image-processing method according to claim 11 characterized by controlling not to register.
[Claim 13] The aforementioned picture is the image-processing method according to claim 11 characterized by considering as the picture read from the scanner.
[Claim 14] The aforementioned picture is the image-processing method according to claim 11 characterized by considering as the picture photoed with the digital camera.
[Claim 15] The aforementioned picture is the image-processing method according to claim 11 characterized by considering as the picture stored in the storage.
[Claim 16] The aforementioned picture is the image-processing method according to claim 11 characterized by considering as the picture read from the film scanner.
[Claim 17] the image information which points to a desired selection condition and is in agreement with the conditions concerned out of two or more image information according to the selection condition by which directions were carried out [aforementioned] out of the selection condition of two or more image information registered beforehand -- calling -- the aforementioned call appearance -- the image-processing method characterized by outputting image information the bottom

[Claim 18] The aforementioned selection condition is the image-processing method according to claim 17 characterized by considering as the conditions on the basis of the order of storing in two or more aforementioned image information.

[Claim 19] The aforementioned selection condition is the image-processing method according to claim 17 characterized by considering as the magnetic information memorized by matching with each of the aforementioned image information.

[Claim 20] The image-processing method according to claim 17 characterized by performing processing corresponding to the name which displayed the name showing the aforementioned selection condition in a list and was specified out of the name which carried out [aforementioned] the list display to a picture with the name showing two or more layout information registered beforehand.

[Claim 21] The image processing system carry out having a directions means to direct two or more edit processings performed to a picture, a registration means to register two or more edit processings by which directions were carried out [aforementioned] as a mass of edit group, and a discernment means to discriminate two or more edit processings performed to a picture by the specification of an edit group by which registration was carried out [aforementioned] as the feature.

[Claim 22] The aforementioned registration means is an image processing system according to claim 21 which adds an identifier to the aforementioned edit group, registers, and is characterized by having a list display means to display two or more identifiers registered in a list, and a call means to call the edit group corresponding to the identifier chosen from two or more identifiers which carried out [aforementioned] the list display.

[Claim 23] The aforementioned registration means is an image processing system according to claim 21 characterized by registering two or more edit processings by which directions were carried out [aforementioned] as layout information.

[Claim 24] The aforementioned edit processing is an image processing system according to claim 21 characterized by considering as rotation of a picture.

[Claim 25] The aforementioned edit processing is an image processing system according to claim 21 characterized by considering as expansion of a picture.

[Claim 26] The aforementioned edit processing is an image processing system according to claim 21 characterized by considering as reduction of a picture.

[Claim 27] The aforementioned edit processing is an image processing system according to claim 21 characterized by considering as change of the brightness of a picture.

[Claim 28] The aforementioned edit processing is an image processing system according to claim 21 characterized by considering as change of the contrast of a picture.

[Claim 29] The aforementioned edit processing is an image processing system according to claim 21 characterized by considering as specification of the aspect ratio of a picture.

[Claim 30] The image processing system according to claim 21 characterized by having an edit means to perform two or more edit processings which the aforementioned discernment means discriminated to the newly inputted image information.

[Claim 31] The image processing system carry out having an edit means perform to other pictures call the edit processing which is matched with the specified identifier concerned and is registered according to an edit processing discernment means discriminate the edit processing performed to the picture, a registration means match and register an identifier to the edit processing discriminated by the aforementioned edit processing discernment means, and specification of an identifier, and differ with the aforementioned picture as the feature.

[Claim 32] The picture which performed the edit processing concerned when the aforementioned registration means registered the aforementioned edit processing is an image processing system according to claim 31 characterized by controlling not to register.

[Claim 33] The image processing system according to claim 31 characterized by having the scanner which reads the aforementioned picture.

[Claim 34] The aforementioned picture is an image processing system according to claim 31 characterized by considering as the picture photoed with the digital camera.

[Claim 35] The image processing system according to claim 31 characterized by having a reading means to read the aforementioned picture in a storage.

[Claim 36] The image processing system according to claim 31 characterized by having the film scanner which reads the aforementioned picture.

[Claim 37] The image processing system characterized by having a directions means to direct a desired selection condition out of the selection condition of two or more image information registered beforehand, an image information call means to call the image information which is in agreement with the conditions concerned out of two or more image information according to the selection condition directed by the

aforementioned directions means, and an output means to output the image information called by the aforementioned image information call means.

[Claim 38] The aforementioned selection condition is an image processing system according to claim 37 characterized by considering as the conditions on the basis of the order of storing in two or more aforementioned image information.

[Claim 39] The aforementioned selection condition is an image processing system according to claim 37 characterized by considering as the magnetic information memorized by matching with each of the aforementioned image information.

[Claim 40] The image processing system according to claim 37 characterized by having the control means controlled to perform processing corresponding to the name specified to be the list display control means controlled to display the name showing the aforementioned selection condition in a list out of the name which carried out [aforementioned] the list display to a picture with the name showing two or more layout information registered beforehand.

[Claim 41] A storage possible in reading [computer / memorized the control program for directing two or more edit processings performed to a picture, the control program for registering two or more edit processings by which directions were carried out / aforementioned / as a mass of edit group, and the control program for discriminating two or more edit processings in which it gives to a picture by specification of an edit group by which registration was carried out / aforementioned] /.

[Claim 42] The storage according to claim 41 which memorized the control program for calling the edit group corresponding to the identifier chosen the control program for adding and registering an identifier to the aforementioned edit group, the control program for controlling to display two or more identifiers registered in a list, and from two or more identifiers which carried out [aforementioned] the list display.

[Claim 43] The storage according to claim 41 characterized by memorizing the control program for registering two or more edit processings by which directions were carried out [aforementioned] as layout information.

[Claim 44] The storage according to claim 41 characterized by memorizing the control program for performing two or more edit processings which carried out [aforementioned] discernment to the newly inputted image information.

[Claim 45] A storage possible in reading [computer / memorized the control program for performing to other pictures which call the edit processing which is matched and is registered into the specified identifier concerned according to the control program for discriminating the edit processing performed to the picture, the control program for matching and registering an identifier into the edit processing by which discernment was carried out / aforementioned /, and specification of an identifier, and are different with the aforementioned picture].

[Claim 46] The picture which performed the edit processing concerned when registering the aforementioned edit processing is a storage according to claim 45 characterized by memorizing the control program for controlling not to register.

[Claim 47] the storage in which reading [computer / which memorized the control program for directing a desired selection condition out of the selection condition of two or more image information registered beforehand, the control program for calling the image information which is in agreement with the conditions concerned out of two or more image information according to the selection condition by which directions were carried out / aforementioned /, and the control program for outputting the image information which carried out / aforementioned / call appearance] is possible

[Claim 48] The storage according to claim 48 characterized by memorizing the control program for performing processing corresponding to the name specified to be a control program for controlling to display the name showing the aforementioned selection condition in a list out of the name which carried out [aforementioned] the list display to a picture with the name showing two or more layout information registered beforehand.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] this invention relates to the image-processing method, the equipment, and the storage which can perform desired edit processing to a picture.

[0002] this invention relates to the image-processing method, the equipment, and the storage for raising the operability at the time of directing edit processing.

[0003] this invention relates to the image-processing method, the equipment, and the storage which can choose and arrange desired image information from two or more image information.

[0004]

[Description of the Prior Art] It pointed to the selected picture conventionally, the performed edit processing was memorized to the image information, and storage of only edit processing was not completed.

[0005] Conventionally, the conditions when choosing a picture from two or more pictures had to be directed whenever it chose.

[0006]

[Problem(s) to be Solved by the Invention] However, the template currently beforehand prepared in the above-mentioned Prior art, for example, for example, when desired pictures, such as a picture which the operator photoed to some chicken types of a Christmas card or a New Year's card, are arranged and edit processing of expansion, reduction, movement, rotation, etc. is moreover carried out to the picture The edit processing performed to the picture was memorized to the picture, and when the picture arranged to a template was changed into a different picture, it had to repoint to those edit processings to the new picture again.

[0007] Therefore, the same edit directions operation had to be repeated by picture number of sheets, and had to be performed and it was very trouble to perform the same edit processing to two or more pictures.

[0008] Moreover, in the above-mentioned Prior art, when repeating and using the same selection condition and choosing a picture, the selection condition had to be inputted into whenever [the] and it was very trouble.

[0009]

[Means for Solving the Problem] In order to solve the technical problem of the above-mentioned conventional technology, this invention points to two or more edit processings performed to a picture, two or more edit processings by which directions were carried out [aforementioned] are registered as a mass of edit group, and two or more edit processings performed to a picture are discriminated by the specification of an edit group by which registration was carried out [aforementioned].

[0010] In order to solve the technical problem of the above-mentioned conventional technology, this invention calls the edit group corresponding to the identifier which added the identifier to the aforementioned edit group preferably, registered, displayed two or more identifiers registered in a list, and was chosen from two or more identifiers which carried out [aforementioned] the list display.

[0011] In order to solve the technical problem of the above-mentioned conventional technology, this invention registers two or more edit processings by which directions were carried out [aforementioned] preferably as layout information.

[0012] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and the aforementioned edit processing is considered as rotation of a picture.

[0013] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and the aforementioned edit processing is considered as expansion of a picture.

[0014] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and the aforementioned edit processing is considered as reduction of a picture.

[0015] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and the aforementioned edit processing is considered as change of the brightness of

a picture.

[0016] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and the aforementioned edit processing is considered as change of the contrast of a picture.

[0017] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and the aforementioned edit processing is considered as specification of the aspect ratio of a picture.

[0018] In order to solve the technical problem of the above-mentioned conventional technology, this invention performs two or more edit processings which carried out [aforementioned] discernment preferably to the newly inputted image information.

[0019] It performs to other pictures call the edit processing which this invention discriminates the edit processing performed to the picture, and matches and registers an identifier into the edit processing by which discernment was carried out [aforementioned], and is matched and is registered into the specified identifier concerned according to specification of an identifier in order to solve the technical problem of the above-mentioned conventional technology, and differ with the aforementioned picture.

[0020] In order to solve the technical problem of the above-mentioned conventional technology, when this invention registers the aforementioned edit processing preferably, the picture which performed the edit processing concerned is controlled not to register.

[0021] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and let the aforementioned picture be the picture read from the scanner.

[0022] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and let the aforementioned picture be the picture photoed with the digital camera.

[0023] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and let the aforementioned picture be the picture stored in the storage.

[0024] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and let the aforementioned picture be the picture read from the film scanner.

[0025] in order to solve the technical problem of the above-mentioned conventional technology, this invention calls the image information which points to a desired selection condition and is in agreement with the conditions concerned out of two or more image information according to the selection condition by which directions were carried out [aforementioned] out of the selection condition of two or more image information registered beforehand, and outputs the image information which carried out [aforementioned] call appearance

[0026] In order to solve the technical problem of the above-mentioned conventional technology, this invention is taken as the conditions on the basis of the order of storing in the desirable image information of the aforementioned plurality [selection condition / aforementioned].

[0027] In order to solve the technical problem of the above-mentioned conventional technology, this invention is desirable and the aforementioned selection condition is taken as the magnetic information memorized by matching with each of the aforementioned image information.

[0028] In order to solve the technical problem of the above-mentioned conventional technology, this invention performs processing corresponding to the name which displayed the name showing the aforementioned selection condition in a list and was specified out of the name which carried out [aforementioned] the list display to a picture with the name showing two or more layout information registered beforehand preferably.

[0029]

[Embodiments of the Invention] <u>Drawing 1</u> is the block diagram showing the composition of the image processing system concerning this invention. You may be the possible storage of functioning as a picture input means by which the picture reader 1 reads the picture of manuscripts, such as a scanner, optically in drawing 1, it being removable to these equipments, such as others, CD-ROM and FD, and MO, memorizing image data, and inputting into this equipment, or may be a communication interface for downloading image data from the end of many items it connects through a communication line. [scanner] Moreover, the picture to read may be a picture which read optically the picture recorded or written down in a record medium like paper, and may be a digital image which you may make it input the picture of a film, using a film scanner as a picture reader 1, or was photoed with the digital camera etc.

[0030] Image display equipment 2 functions also as work memory which it functions as an image display means to display the image data inputted from the picture reader 1, and memory 4 stores the image data inputted by the picture reader 1 including memory (ROM) 3, memory (RAM) 4, a microprocessor 5, and the display screen 6, and stores the data which are in the middle of processing and were produced. Furthermore, the registration data concerning this invention are also registered into memory 4. Even if the control program for performing the flow chart mentioned later is stored in memory 3, it may be stored

in memory 4. Storages removable to this equipment (for example, CD-ROM, FD, MO, etc.) When downloading a control program from un-illustrating and the end of the other end it connects through a communication line, it stores in memory 4. According to the control program stored in memory 3 and 4, processing concerning the basis of control of a microprocessor 5 and this invention is performed. CRT and a liquid crystal display are realized and the display screen 6 enables it to perform edit of the picture on the screen, and registration of various data on the display screen 6 by displaying the screen which performs image data and various edits, and the registration screen of data. It enables it to direct the coordinate of the request on the display screen 6 by displaying cursor 8 on the display screen 6, and moving cursor to a desired position.

[0031] a means by which the input means 7 inputs a character code and functions, such as a keyboard, -- or it is coordinate input meanses, such as a mouse and a tablet, and functions as a means to input various data Image data, graphic data, a character string, etc. function as an output means to output the data created by the display screen 6, and a printer 9 is realized by LBP, the ink jet printer, etc. Therefore, it is read by the picture reader 1, and directions of the kind of edit are inputted by the input means 7, edit processing is performed by the microprocessor 5, and, as for edit processing of movement to the picture displayed on the display screen 6, rotation, expansion, reduction, etc., the picture after edit is outputted from a printer 9.

[0032] In addition, you may be not the thing that restricts all the composition shown in drawing 1 to the equipment which it had independently as a gestalt which carries out the invention in this application but the system to which the picture reader 1 and the printer 9 grade are connected through image display equipment 2 and the input means 7, and the network.

[0033] Drawing 4 is a main screen for directing processing concerning this invention, and is displayed as a window on the display screen 6. In this screen, the picture inputted from the picture reading means 1 is displayed, and processing which chooses a desired picture out of the displayed picture is performed. Reading start directions of the picture by the picture reading means 1 are made by directing the reading button 14. although it answers having directed the reading button 14 once and one reading processing by the picture reading means 1 is performed, a reading object tries to read two or more pictures by this one reading processing, and displays two or more picture **** case on a main screen In addition, directions of the various buttons displayed on the display screen The coordinate of the position directed when the position where the pattern of the button is displayed was directed with the input means 7 (for example, the click of mouse button or the tap of the pen on a tablet etc.), It is possible by judging which button was directed by comparing the coordinate information (stored in memory 4) showing the field which shows the button. This is the same about which screen mentioned later and every button. Moreover, of course, you may input the command equivalent to the various buttons on a screen from a keyboard.

[0034] In a main screen, the picture then chosen is printed from a printer 9 according to directions of the printing button 15. With the picture chosen, it is read from the picture reading means 1 here. Out of two or more pictures currently displayed as a thumbnail picture (reduction picture) Selection of the picture is directed by the click of the input means on the thumbnail picture 13, or the click of the input means on the check box 13 prepared every thumbnail picture 12. It is the thing of the picture as which the identifier which makes it identifiable to have been chosen as the check box 13 according to having been chosen is displayed. It enables it to discriminate a selection picture and a non-choosing picture by displaying a "RE" mark on a check box 13 in the example of drawing 6 . Whenever it clicks selection processing of this picture on the thumbnail picture 12 or a check box 13, it changes selection and un-choosing by turns, and it stores the state of the picture in memory 4. Moreover, the selected picture is displayed on the printing image preview window 11. However, since only the picture arranged in one sheet of form is displayed on the printing image preview window 11, the picture which indicates by preview can be changed before and after the picture displayed now by clicking the preview page turning-over button 16. Moreover, if it arranges with the layout which had the selected picture chosen as a preview page turning-over button side, there is how many sheets of form in all, and the numeric value which shows the form of what position of them is displayed on the printing image preview window 11 is displayed. In the example of drawing 4 , there are four forms in all and it is shown that the 1st of the sheets of it is displayed on the printing image preview window 11. In the example of drawing 4 , the preview display of the selected picture is un-illustrating.

[0035] The layout which is in a selection state out of the layout beforehand registered into memory 4 is displayed on the printing setting box 10. By the input means 7, by directing the downward triangular button of the printing setting box 10, the layout name which can be set as the printing setting box 10 and which should be displayed is read from memory 4, and it displays as a pull down menu. Drawing 5 is a display instantiation view at that time. Here, nine layout names are displayed and the example of a display in the case of making it selectable is shown. By directing a desired layout name within this pull

down menu, the layout information memorized by matching with the name is read from memory 4, and it is set as a selection picture. Although the printing image preview window 11 displays the picture arranged at one sheet of form, when the picture is not chosen yet, it displays the frame showing the layout of the picture according to the layout information corresponding to the layout name currently displayed on the printing setting box 10 like drawing 4 . It is the example which arranges the picture of one sheet in one sheet of form in the example of drawing 6 . That is, whenever a layout is chosen in the printing setting box 10, the display of the frame in the printing image preview window 11 is updated.

[0036] Moreover, when a picture is chosen, the picture is expressed in the printing image preview window 11 as the layout corresponding to the layout name currently displayed on the printing setting box 10. That is, a picture is appended to the position of the frame currently displayed in the state of picture un-choosing.

[0037] It can direct to display the thumbnail picture of the position which clicked the button on the printing image preview window 11 by moving cursor into the printing image preview window 11, clicking the button of a mouse on a thumbnail picture, and canceling the click of a button there. The printing image preview window 11 which displayed the picture chosen by such picture selection directions operation is as being shown in drawing 6 .

[0038] Moreover, there is the method of choosing the layout name which contains the selection condition of a picture with the printing setting box 10 other than the method of directing choosing to a thumbnail picture as the selection method of a picture as mentioned above. In the example of this drawing 6 , in the printing setting box 10, since the layout in which the selection condition of the picture of "the first four coma of a picture" is contained was chosen, the first four coma is chosen from the thumbnail pictures 12, and the identifier which also shows a selection state to the check box of each thumbnail picture is displayed.

[0039] Moreover, when the layout which includes the magnetic information on the picture of an "APS panorama" which is displayed on the pull down menu of drawing 5 as a selection condition as the selection method of a picture using the printing setting box 10 is chosen, there is also the method of choosing the picture which reads each magnetic information on the thumbnail picture currently displayed, and is in agreement with a selection condition, i.e., the picture photoed by the APS panorama in this case. When reading a picture by the picture reading means 1, magnetic information is both read and is stored in memory 4.

[0040] Next, the processing which registers a desired layout so that it can display on the pull down menu of a printing setting box 10 like drawing 5 as a candidate for selection is explained. Registration processing of this layout is registered into memory 4 when an operator inputs required information by the input means 7. Drawing 2 is a flow chart which shows the processing at the time of registration of a layout.

[0041] In order to specify the layout to register, by directing the edit button 17 in a main screen, an edit display (drawing 7) is displayed and the edit processing which should be performed to a picture on this screen is directed. In the form selection box 32, it is a desired paper size and the sense of a form, for example, A4 size, or is B5 size, or every length and every width are directed. This form selection box 32 offers the information stored in memory 4 as the paper size which can be specified beforehand, and a combination pattern of the sense of a form with the form of a pull down menu, and chooses from the inside the paper size the operator was instructed to be according to directions by the input means 7, and the sense of a form. If a form is chosen in the form selection box 32, the frame which expresses the sense of the paper size and form with the print preview window 31 will be displayed. The edit processing performed to the layout which arranges a picture, and its picture is set up in this form. Moreover, the origin of the layout to set up can be obtained by choosing a desired layout with the layout selection box 33 by displaying the frame showing the selected layout on the print preview window 31. The layout name displayed on the layout selection box 33 is the same as the layout name displayed on the pull down menu of drawing 5 , and is a layout name stored in memory 4. However, the layout information set up by this edit display is arrangement and edit processing of a picture, and since the selection condition of a picture is set up on other screens mentioned later, in a layout selection box, you may control the layout name only showing the selection condition of a picture not to display.

[0042] If a layout name is chosen with the layout selection box 33, the layout information corresponding to the layout name will be read from memory 4, the frame showing the layout will be displayed on the print preview window 31, and directions of the edit processing to the frame will be started.

[0043] By directing the various buttons currently displayed on the edit processing directions button viewing window 34 by the input means 7, directions of edit processing perform edit processing corresponding to the button to the frame currently displayed on the print preview window 31, and store the kind of the directed edit in memory 4. At the time of the layout which arranges two or more pictures

in one sheet of form, after choosing the picture of the object which edits, the edit processing matched with the picture for edit and its picture can be specified by directing the kind of edit. When the kind of edit is inputted, this is discriminating the picture which is in the selection state, matching the kind of edit directed to the arrangement information on the picture, and storing in memory 4, and can be realized. It is displayed on the edit directions button viewing window 34 as a directions button, and the kinds of edit which can be chosen are specification of the aspect ratio of a picture, the trimming of the specification range, 90 right rotation of a picture, 90 left rotation, expansion of the picture for every predetermined percent, reduction of the picture for every predetermined percent, mirror image reversal, brightness adjustment, contrast adjustment, etc. Moreover, the picture elimination command for eliminating the select command and the command which cancels the directed edit and to return which chooses all the pictures currently displayed on the print preview window 31 as auxiliary commands of edit processing directions, and the picture directed in the print preview window 31 altogether is also displayed on the edit processing directions button viewing window 34, and is made selectable.

[0044] In this print preview window 31, it is good as environment where various edit processings are performed to the frame showing a picture, and is good also as environment where display a picture on the print preview window 31, and edit processing is performed on the more real display screen, by choosing the thumbnail picture currently displayed in the thumbnail image display window 35 by method which was explained previously. The thumbnail picture 36 displayed on this thumbnail image display window 35 is a picture by which it was indicated by thumbnail on the main screen, when the edit button 17 is directed.

[0045] When the detailed setup key 30 is directed after directing such edit processing, a registration screen (drawing 8) is displayed on the display screen 6, and registration directions of a layout are performed (S1). Display the layout which the operator edited by the previous edit display and was processed on the layout preview viewing window 43 of a registration screen, an operator enables it to check (S2), and the directions input to the printing setting list 19, the new layout name box 40, the magnetic information box 41, and the picture incidental information box 42 is received further (S3). The magnetic information list displayed on the magnetic information box 41 with the form of a pull down menu is shown in drawing 9 . These information is beforehand memorized by memory 4, according to directions of the downward triangular button of the magnetic information box 41, is read from memory 4 and displayed. The magnetic information directed by the input means 7 within this list is chosen, and it displays on the magnetic information box 41.

[0046] The picture incidental information list displayed on the picture incidental information box 42 with the form of a pull down menu is shown in drawing 10 . These information is beforehand memorized by memory 4, according to directions of the downward triangular button of the picture incidental information box 42, is read from memory 4 and displayed. The picture incidental information directed by the input means 7 within this list is chosen, and it displays on the picture incidental information box 42. When picture incidental information shows the selection condition when choosing a picture here and the incidental information of all pictures is chosen, it controls to be displayed as a thumbnail picture, namely, to choose, arrange and output all the pictures read by the picture reading means 1. Moreover, when the incidental information of the picture in every other one is chosen, it is displayed as a thumbnail picture, namely, is every other one, i.e., the thing which chooses, arranges and outputs the picture of an eye, the third picture, the fifth picture, and ·· most, from the picture of an eye most among the pictures read by the picture reading means 1.

[0047] When the registration button 44 is directed, to (S4) The layout which consists of a position which arranges the picture currently displayed on the layout view viewing window 43 at the time, and edit processing, The printing setting information currently displayed on the printing setting list box 19, the size information on the photograph currently displayed on the size box of a photograph, The form selection information currently displayed on the form selection box, the number information on the picture currently displayed on the number box of a picture, The stage information currently displayed on the magnetic information box 41 and the picture incidental information currently displayed on the picture incidental information box 42 are matched with the layout name currently displayed on the new layout name box 40, and is memorized in memory 4 (S5). In addition, even if the layout information registered into memory 4 is the case where the various information on a layout is directed on the preview window which displayed the picture, except for the picture, it considers only as the kind and level (for example, parameters, such as expansion and percent of reduction) of edit which were directed. The character string of the request which a layout name functions as an identifier for calling each above-mentioned information, and is inputted by a keyboard, the softkey, etc. may also be a digit string. Each information stored in memory 4 whenever it was inputted on the registration screen (drawing 8), when the deletion button 45 was directed is altogether eliminated from memory 4, and it returns to an

edit display (drawing 7). Moreover, when a cancellation button is directed, after a registration screen (drawing 8) is displayed, it is newly inputted, and the information stored in memory 4 is eliminated from memory 4, and it returns to an edit display (drawing 7).

[0048] Moreover, in editing the layout which does not register a new layout but has already been registered, after specifying the layout name by the edit display (drawing 7), calling layout information and directing edit on an edit display and a registration screen to the layout information, layout information is updated to the newly directed information by directing the O.K. button 46. In this case, after displaying the layout name of the layout previously called by the edit display on the new layout name box 40 and calling and displaying layout information to the directed layout name according to directions of the O.K. button 46, the information in the memory 4 of the item newly changed [which were changed and was directions-inputted] is updated to the information newly inputted or changed.

[0049] The processing at the time of the call of the registered layout is explained using the flow chart of drawing 3 . In a main screen (drawing 6), if a desired layout name is chosen with the printing setting box 10, the frame which calls the layout information which matches with the layout name and is stored in memory 4, and shows the layout to the print preview window 11 will be displayed, and the check of the layout by the operator (S21) will be enabled. Moreover, when the selected layout is a thing also containing the selection condition of a picture, a picture is chosen according to the selection condition, and when it is that in which the selected layout does not contain the selection condition of a picture, selection operation of a picture is received (S22). If selection operation of the picture by the operator is made in S23, it will progress to S24. In S24, the picture chosen by S22 or S23 is appended and displayed on the print preview window 11. Let the picture displayed on the print preview window 11 be the picture arranged and edited as the layout called from memory 4 corresponding to the selected layout name. Print data are constituted as it was displayed on (S25) and the print preview window 11, when the printing button 15 was directed, and it prints from a printer 9.

[0050]

[Effect of the Invention] In picture printing application, by as mentioned above, the thing for which the operator itself registers as a template the size and the degree of tilt angle of a picture, and the edit group which is not position [a group] and cut, and which comes, edits the range, ****, etc. and consists of those edit directions of two or more when it appends a picture which calls the same layout and is different, the picture which performed two or more edit processings which the operator directed before can be appended to a print sheet only by choosing a picture, and operability is markedly alike and improves Moreover, since it becomes unnecessary to direct repeat edit processing, possibility that a failure will happen also becomes low and more exact edit can be performed.

[0051] Moreover, for example, the date currently recorded in relation to the picture like the magnetic information in an APS film, Magnetic information, such as time, exposure, a focal distance, and an aspect ratio (aspect ratio) of a picture When registering beforehand two or more selection conditions on the basis of the order of storing of two or more image information used as the candidate for selection and **(ing) a selection condition, the operability of directions of a selection condition improves by carrying out that what is necessary is just to direct a desired selection condition out of two or more of the selection conditions registered.

[Translation done.]

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The block diagram showing the composition of the image processing system concerning this invention

[Drawing 2] The flow chart of layout registration processing

[Drawing 3] The flow chart of layout call processing

[Drawing 4] The display instantiation view of a main screen

[Drawing 5] The display instantiation view when performing a printing setup in a main screen

[Drawing 6] The display instantiation view when specifying the selection condition of a picture in a main screen

[Drawing 7] The display instantiation view of an edit display

[Drawing 8] The display instantiation view of a registration screen

[Drawing 9] Magnetic information list instantiation view

[Drawing 10] Picture incidental information list instantiation view

---

[Translation done.]